

US EPA RECORDS CENTER REGION 5



466408

Monthly Oversight Report 60
44728 AES [46526 RAC]
ACS NPL Site
Griffith, Indiana
December 3, 2005 – December 30, 2005



BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/AES
American Chemical Service, Inc. RAO (0057-ROBE-05J7)

BVSPC Project 44728
BVSPC File C.3
January 13, 2006

Mr. Kevin Adler
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report
No. 60 for December 2005

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 60 for December 2005 for the American Chemical Service, Inc. Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.
Site Manager

Enclosure

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MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems and the OFCA and SBPA air sparge systems, processing vapors through thermal oxidizer units 1 and 2 (thermox 1 and 2).

MWH reported that thermox 1 operated for 29.5 of the 31 days in December, processing 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from 29 of the 46 ISVE wells. MWH reported that thermox 2 operated for 30 of the 31 days in December, processing 2,000 cfm of vapors collected from all 42 OFCA ISVE wells and aeration tank T102. MWH reported that operation of the GWTP continued while thermox 2 was out of service by routing the vapors from aeration tank T102 through thermox 1.

MWH reported that it pumped 169 gallons of product from six ISVE wells in the SBPA during 4 weeks in December: 52 gallons on December 8, 47 gallons on December 14, 32 gallons on December 22, and 38 gallons on December 29. Typically, only 1 to 4 gallons were pumped from four wells, but 19, 15, 6, and 8 gallons were pumped from SVE-53 and 22, 25, 20, and 21 gallons were pumped from DPE-61.

MWH started the SBPA ISVE air injection system in November and was able to inject air into 15 of the planned 18 wells. Air could not be injected into SVE-60, SVE-66 and SVE-83 utilizing the pressure and flow available from the blower. Additional testing was performed on December 6.

MWH reported during the December 6 testing that extracted VOC concentrations for selected ISVE extraction wells increased from 70-80 ppm (without air injection) to 2,500-8,700 ppm (with air injection).

MWH reported that ACS had not reported a recurrence of odors in its break room on the SBPA.

MWH conducted an operations and maintenance (O&M) meeting at its Chicago office on December 9. BVSPC attended this meeting.

Because of the lack of field activity, weekly reports are not attached. Weekly reports will be prepared in the future if there are sufficient field activities to warrant such reporting. However, correspondence, log book notes and photographs of the daily activities are attached. BVSPC conducted oversight of the field activities on December 6.

Topics of Concern: None

Concern Resolution: None

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to complete testing the upgrades to the SBPA ISVE system.
- MWH to monitor odors in the ACS break room.
- MWH to continue pumping product from selected ONCA SBPA dual phase extraction wells.

- MWH will continue weekly construction coordination meetings at the site when field activities warrant such meetings.
- MWH will continue monthly O&M meetings to report on operation of active treatment systems.

Signature: Larry Campbell

Date: January 13, 2006

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**SITE STATUS MEETING MINUTES
FOR DECEMBER 9, 2005 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

RECEIVED
DEC 16 2005
L. M. CAMPBELL

MEETING DATE: Friday, December 9, 2005

MEETING TIME: 10:00 a.m.

MEETING LOCATION: MWH Chicago Office

ATTENDEES: Kevin Adler – U.S. EPA (via phone)
Larry Campbell – Black & Veatch
Amy Clore – MWH
Chris Daly – MWH
Lee Orosz – MWH (via phone)
David Powers - MWH
Peter Vagt – MWH

TOPICS:

SITE STATUS

General Site Health and Safety

There have been no health and safety issues since the last meeting held on November 15th. Annual treatment plant maintenance involved various health and safety activities concerning tank cleaning, sludge removal, and confined space and these were completed in a safe and proper manner.

Groundwater Treatment Plant (GWTP) Status

The GWTP ran 86 percent throughout the month of November. On November 14th, the GWTP was shutdown for annual maintenance. During this time equipment was inspected and cleaned. The GWTP was restarted on Friday, November 18th with no issues. Neither of the Thermal Oxidizer units and ISVE systems were operated during the GWTP shutdown.

Off-Site Area/SBPA ISVE Systems

Eclipse Inc. came to the Site during the week of November 21st to analyze the burner controllers on the Thermal Oxidizer units and test the fuel train efficiency of each unit. Thermal Oxidizer 1 (ThermOx 1) was found to be running at an efficiency of approximately 80 percent. The air/gas regulator was replaced and the spark igniter and coil were adjusted to increase the efficiency. Thermal Oxidizer 2 (ThermOx 2) was found to be running as efficiently as possible and no changes were made to the unit.

Product removal activities in the SBPA were conducted during the week of December 5th. Removal activities will be conducted for five consecutive weeks.

ISVE System Upgrades

The SBPA ISVE system was brought online for testing during the week of November 7th. The 18 target ISVE wells were evaluated for their ability to accept pressurized air. The design memorandum designated 19 wells for air injection; however, since that document was issued, SVE-61 has been included in the product recovery program. On November 20, 2005, air was successfully injected into 15 of the 18 wells. Air could not be injected into three wells (SVE-60, SVE-66, and SVE-83) utilizing the pressure and flow available from the blower. MWH was onsite during the week of December 5th to conduct more testing.

Two ISVE wells, SVE-73 and SVE-81, were operated as air injection wells as a “pilot study” of the new air injection system. Over a three-day period, air was injected into the two ISVE wells and the surrounding extraction wells were monitored for airflow, vacuum, and VOC concentrations. Initial results showed an increase in the amount of VOCs measured at the surrounding extraction wells, indicating that the air injection changes should increase the extraction of VOCs present in the SBPA.

Austgen is scheduled to be on site on December 12th to finalize the calibration of the main flow meter. Once the adjustments are made, initial operation of the air injection upgrades will begin and will include wells from three groups rotated on a monthly basis. A summary report of the SBPA ISVE System Upgrades Startup will be submitted to the Agencies later this month.

LOOK AHEAD

Field Events

- SBPA ISVE System Monitoring – December 20th
- 4th Quarter Water Level Gauging – December 19th

Reports

- Summary of SBPA ISVE System Upgrades Startup – December 2005
- Groundwater Monitoring Report – January 2006
- Quarterly Report, 3rd Quarter 2005 – January 2006
- Lower Aquifer Investigation Report – January 2006
- Chemical Oxidation Summary Report – January 2006

Health & Safety Look Ahead

- Proper caution should be used to avoid slips, trips, and falls associated with the winter weather.

Future Meetings

- Monthly Site Status Meeting – Friday, January 13, 2006, 10 a.m. at MWH Chicago office.

ALC/CAD/PJV

\\Uschi4s02\Warrenville\jobs\209\0602 ACS PM\Meetings\Meeting Minutes 2005\ACS Meeting Minutes 12-09-05.doc

Remedial Progress Report	December-05	Report Date: 1/13/2006																																										
GWTP & Dewatering																																												
The GWTP was operational for 30.5 days out of 31 days in December (99%). Total Gallons treated = 725,707 gallons (from 12/8/05 - 12/30/05)		<u>Tables, Graphs & Figures</u> Table - Effluent Summary Graphs - Off-Site Dewatering Graphs - SBPA Dewatering																																										
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System was operational 29.5 out of 31 days in December (95%). System monitoring was conducted on 12/30/05. The next monitoring event is scheduled for 1/24/06.		Active Extraction Wells (29 of 46 total) <table border="1"> <tr><td>SVE-43</td><td>SVE-65</td></tr> <tr><td>SVE-44</td><td>SVE-67</td></tr> <tr><td>SVE-45</td><td>SVE-68</td></tr> <tr><td>SVE-47</td><td>SVE-70</td></tr> <tr><td>SVE-48</td><td>SVE-71</td></tr> <tr><td>SVE-49</td><td>SVE-74</td></tr> <tr><td>SVE-51</td><td>SVE-75</td></tr> <tr><td>SVE-55</td><td>SVE-76</td></tr> <tr><td>SVE-56</td><td>SVE-82</td></tr> <tr><td>SVE-57</td><td>SVE-83</td></tr> <tr><td>SVE-58</td><td>SVE-84</td></tr> <tr><td>SVE-59</td><td>SVE-85</td></tr> <tr><td>SVE-60</td><td>SVE-86</td></tr> <tr><td>SVE-63</td><td>SVE-87</td></tr> <tr><td>SVE-64</td><td></td></tr> </table>	SVE-43	SVE-65	SVE-44	SVE-67	SVE-45	SVE-68	SVE-47	SVE-70	SVE-48	SVE-71	SVE-49	SVE-74	SVE-51	SVE-75	SVE-55	SVE-76	SVE-56	SVE-82	SVE-57	SVE-83	SVE-58	SVE-84	SVE-59	SVE-85	SVE-60	SVE-86	SVE-63	SVE-87	SVE-64													
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Table
Summary of Effluent Analytical Results
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 101 10/10/2005	Month 102 11/10/2005	Month 103 12/14/2005	Effluent Limits	Lab Reporting Limits
pH	7.22 /J	7.72 /J	8.00	6-9	none
TSS	0.8 B/	NS	NS	30	10
BOD	< 2 / UJ	NS	NS	30	2
Arsenic	10.4	NS	NS	50	3.4
Beryllium	ND	NS	NS	NE	0.2
Cadmium	ND	NS	NS	4.1	0.3
Manganese	14.6 /B	NS	NS	NE	10
Mercury	ND	NS	NS	0.02 (w/DL = 0.64)	0.64
Selenium	ND	NS	NS	8.2	4.3
Thallium	ND	NS	NS	NE	5.7
Zinc	2.1B/UB	NS	NS	411	1.2
Benzene	0.50 U/	0.50 U	0.50 U	5	0.5
Acetone	2.5 U/UJ	2.5 U/UJ	2.5 U	6,800	3
2-Butanone	2.5 U/	2.5 U	2.5 U	210	3
Chloromethane	0.5 U/	0.50 U/UJ	0.50 U	NE	0.5
1,4-Dichlorobenzene	0.50 U/	0.50 U	0.50 U	NE	0.5
1,1-Dichloroethane	0.50 U/	0.50 U	0.50 U	NE	0.5
cis-1,2-Dichloroethene	0.50 U/	0.50 U	0.50 U	70	0.5
Ethylbenzene	0.50 U/	0.50 U	0.50 U	34	0.5
Methylene chloride	1.0	0.64	0.67	5	0.6
Tetrachloroethene	0.50 U/	0.50 U	0.50 U	5	0.5
Trichloroethene	0.50 U/	0.50 U	0.50 U	5	0.5
Vinyl chloride	0.50 U/	0.50 U	0.50 U	2	0.5
4-Methyl-2-pentanone	2.5 U/	2.5 U/UJ	2.5 U	15	3
bis (2-Chloroethyl) ether	ND	NS	NS	9.6	9.6
bis(2-Ethylhexyl) - phthalate	1.7 J/UB	NS	NS	6	6
4 - Methylphenol	ND	NS	NS	34	10
Isophorone	ND	NS	NS	50	10
Pentachlorophenol	ND	NS	NS	1	1
PCB/Aroclor-1016	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Bolded result indicates a exceedence of the discharge limit
pH data is expressed in S.U.
Metals, VOC, SVOC and PCB data is expressed in ug/L
ND = Not detected
NS = This analyte was not sampled or analyzed for
NE = No effluent limit established.
DL = Detection limit
* = Approved SW-846 method is incapable of achieving effluent limit.

DRAFT VERSION

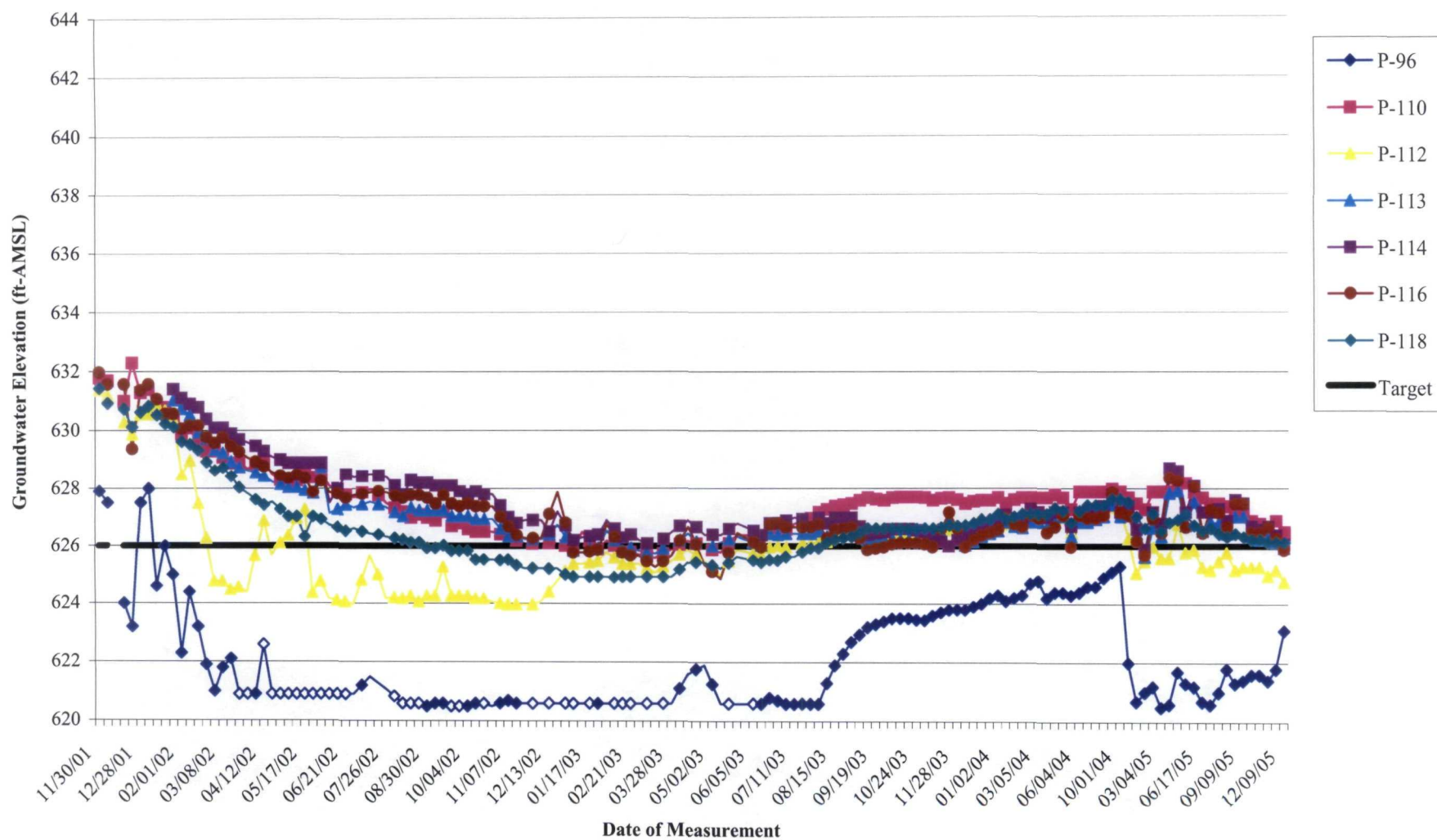
For Informational Purposes Only

Not all data presented here has been validated
Notes and suffix definitions have not been updated.

Suffix Definitions:

/ = Data qualifier added by laboratory
/_ = Data qualifier added by data validator
J = Result is estimated
B = Compound is also detected in the blank
UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value
JB = Result is detected below the reporting limit and is an estimated concentration.
The compound is also detected in the method blank resulting in a potential high bias
UB = Compound or analyte is not detected at or above the indicated concentration due to blank contamination
UBJ = Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

Figure 2
Off-Site Water Level Status
ACS NPL Site
Griffith, Indiana



Note:

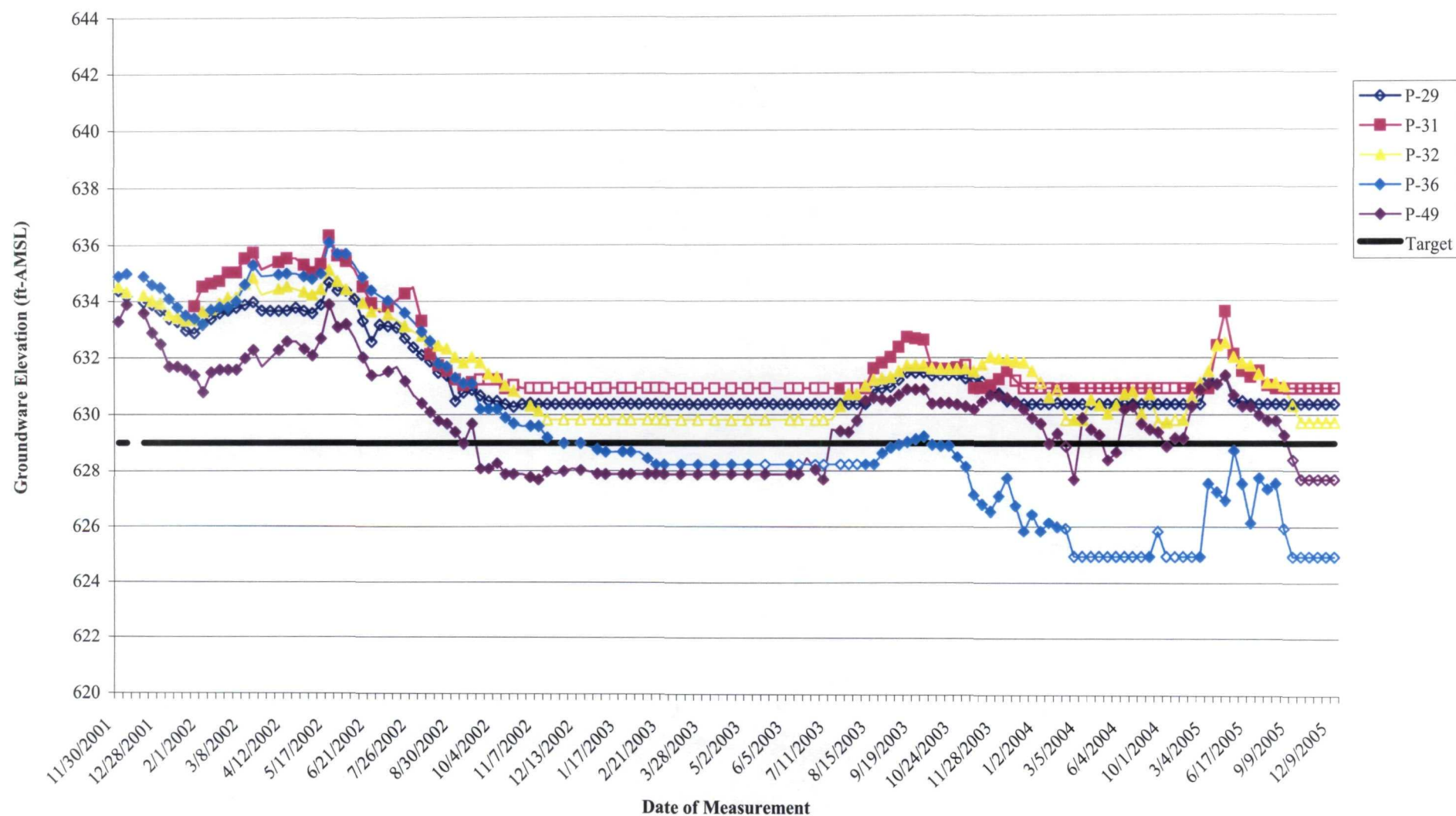
Hollow points represent dry piezometers

(data used for graphing purposes only). The bottom elevation of the piezometers may vary due to silting

ALC/jmf

J:/209/0603/0301/BWES and Dewatering Data/Dec Tables and Figs.xls/Off-Site Chart

Figure 1
SBPA Water Level Status
ACS NPL Site
Griffith, Indiana



Note:

Hollow points represent dry piezometers (data used for graphing purposes only).

The bottom elevation of the piezometers may vary due to silting of the well or removal of silt.

ALC/jmf/CAD

J:/209/0603/0301/BWES Data/Dec Tables and Figs.xls/On-Sit

Table 3
SBPA and Off-Site ISVE System Results
for Method TO-14 (VOCs) - November 2005
American Chemical Service
Griffith, Indiana

Compounds	Units	Sampled 11/8/2005			
		SBPA ISVE		Off-Site ISVE	
1,1,1-Trichloroethane	ppbv	62,000		34,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	ND	U	ND	U
1,1-Dichloroethane	ppbv	6,700		4,600	
1,1-Dichloroethene	ppbv	1,200	J/J	790	
1,2-Dichloroethane	ppbv	670	J/J	1,000	
1,2-Dichloropropane	ppbv	1,300		280	J/J
2-Butanone (Methyl Ethyl Ketone)	ppbv	2,200	J/J	12,000	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	2,000	J/J	7,500	
Acetone	ppbv	1,400	J/J	16,000	
Benzene	ppbv	26,000		21,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	ND	U	ND	U
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	1,300	J	ND	U/R
Chloroform	ppbv	10,000		2,400	
Chloromethane	ppbv	ND	U	ND	U
cis-1,2-Dichloroethene	ppbv	89,000		3,400	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	44,000		18,000	
m,p-Xylene	ppbv	280,000		71,000	
Methylene Chloride	ppbv	9,400		42,000	
o-Xylene	ppbv	150,000		28,000	
Styrene	ppbv	ND	U	ND	U
Tetrachloroethene	ppbv	120,000		30,000	
Toluene	ppbv	370,000		130,000	
trans-1,2-Dichloroethene	ppbv	ND	U	ND	U
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	44,000		22,000	
Vinyl Chloride	ppbv	3,500		430	
Total	ppbv	1,224,670		444,400	
Total	lb/hr	28.617		13.016	

Notes:

_/- Laboratory data qualifier

/_ - Data validation qualifier

NC - Not calculated

ND - Non-detect

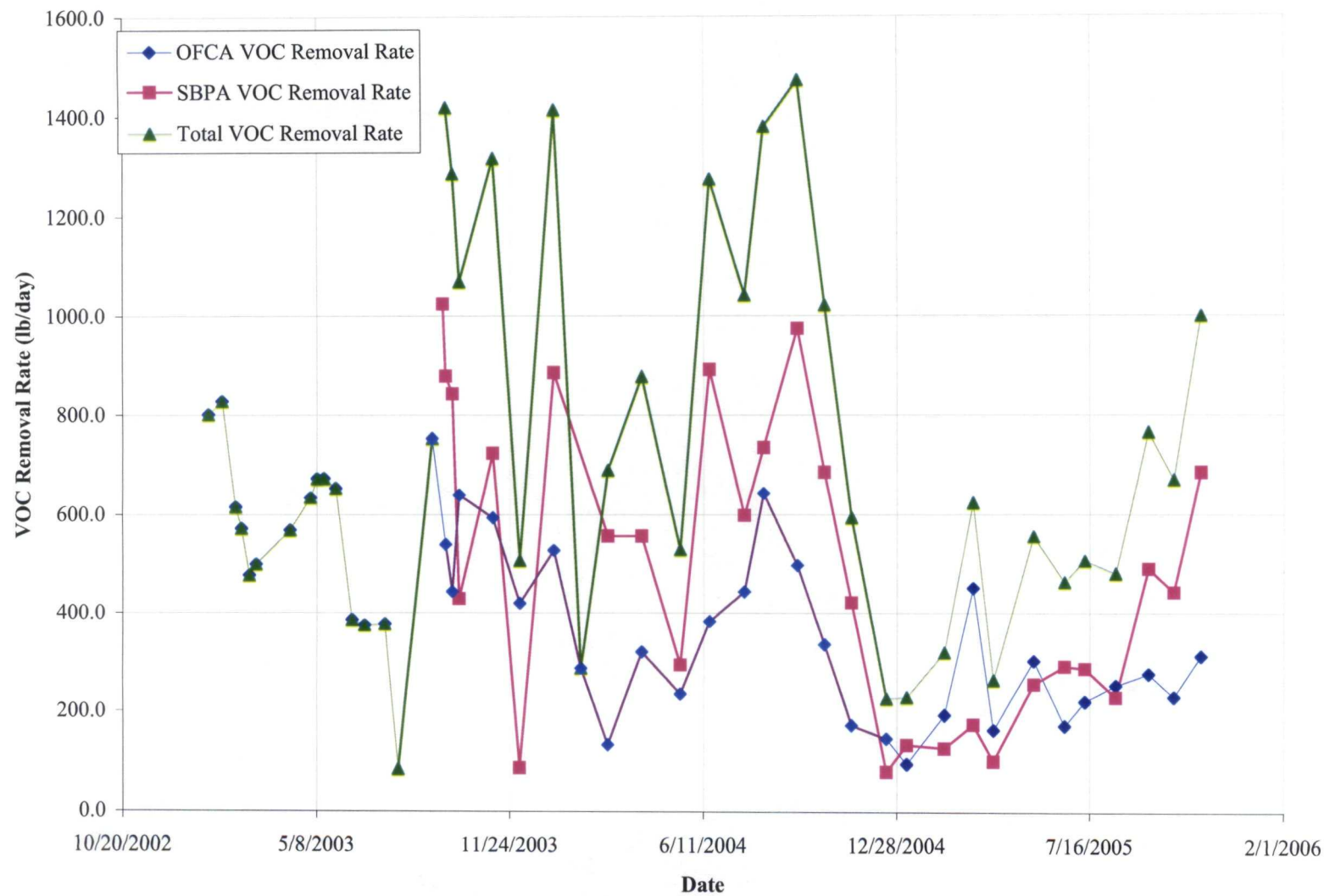
ppbv - parts per billion volume

lb/hr - pounds per hour

11/8/05 VOCs in lb/hr calculated based on Offsite: 1829 scfm, 70 degrees Fahrenheit (11/8/05)

On-site: 1410 scfm, 78 degrees Fahrenheit (11/8/05)

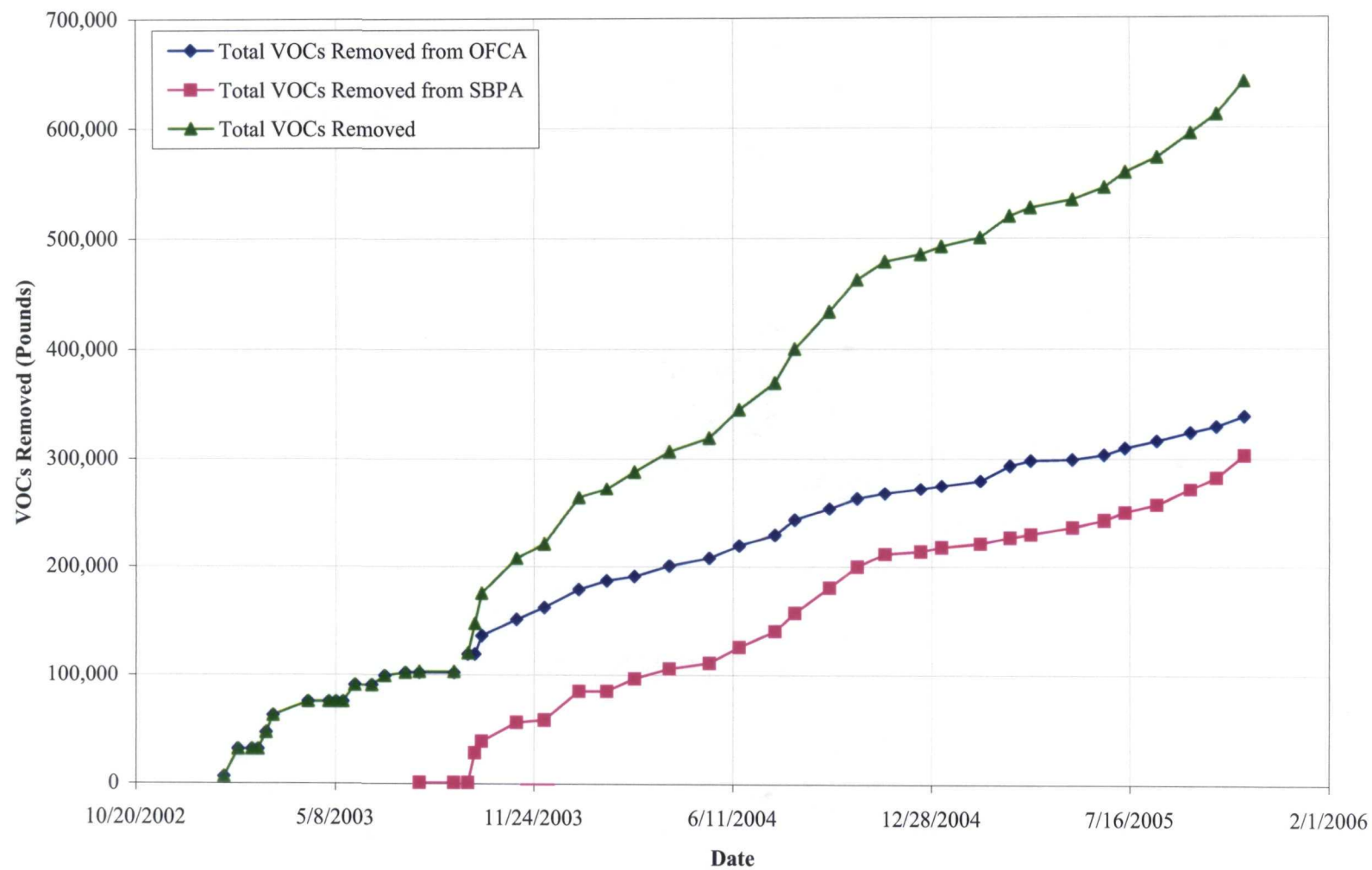
VOC Removal Rate American Chemical Services NPL Site, Griffith, IN



MBM/raa

J:\209\0603\0301\Remedial System Metrics\ISVE\ISVE Mass Removal.xls

Total VOCs Removed
American Chemical Services NPL Site, Griffith, IN



6 Dec 05 Tue

105

0830 Arrive onsite - overcast

Calm cold 12°F

Personnel onsite

Amy Clark MWH

Lee Cross MWH

Tim Kirkland Austgen

Larry Campbell BSRP

0835 Visit SBPA 15W Blower shed
where Amy is checking performance
of air injection system

0837 Photo 82-01 looking SW at Amy
Taking readings of air injection
system

0841 Photo 82-02 looking NW at
gauge on SVE-51 showing ± 1.8 PSI
injection pressure

0843 Photo 82-03 looking SW at
Amy measuring VOC conc in wells

0850 Amy indicate air being injected thru
SVE 7³ & 8³ only + being extracted
from 6 wells SVE 63, 65, 74, 82, 84, 85
VOC readings yesterday at NO injection
were 70-80 ppm. Today w/ air injected
were 250 to 8700 ppm.

JM Campbell

~~106~~
106

0920 Disc w Lee Orosz. Plant
maint from 14-17 Nov
went well. Cleaned many
tanks + filters. Brought
System back online Thur 11/17
w/ NO problems
0930 Left site for Day

Lee Orosz
11/17

9 Dec 05 Fri

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1000 08M mty at MWH office

Attendees:

at MWH office:

Pete Vast, Chris Daly, Amy
Clare, David Powers - MWH
Larry Campbell - BUSPC
Via Phone:

Lee Orosz - MWH

Kevin Adler - EPA

HDS - No issues since last mty. During
Nov 14-18 had plant shut down for
major O&M including tank cleaning
in confined space entry (by IFS).
All went well

GWTP - Ran 26 of 30 days in Nov
Down for maintenance Nov 14-18
Restarted 90 units OK

ISUE - Eclipse Inc. visited site on
Nov. 21 to assess performance of
burner controllers of thermox units
on thermox 1, air gas regulator was
replaced and the spark igniter & coil
were adjusted to increase
efficiency above the current 80%.

Jim Campbell

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Thermax 2 was found to be running as efficiently as possible. The 15VE systems were not operating during general plant O&M. No product was pumped from SBPA 15VE wells in Nov. MWH will begin weekly pumping in December + January for 5 weeks to see if increased removal will result.

Water levels measured yesterday. 4 of 6 measured wells were dry.

15VE Upgrades

On Nov 20, MWH brought air injection system online in SBPA & found could push air into 15 of 18 scheduled 15VE wells. Air could not be injected into 3 wells - SVE 60, SVE 66, SVE 83 using the existing pressure and flow.

MWH continued testing on Dec 5, 6 & 7, injecting air into 2 wells and measuring VOC extracted from surrounding wells.

MWH plans to inject air

Jim Campbell

(109)

using 3 groups of 5 wells each, distributed throughout SBPA. Will rotate groups monthly.

Austgen is to calibrate main flow meter on Dec. 12. Then MWH will start injecting air into 5 wells w/ 100 CFM flow.

MWH will monitor VOCs at edge of cap and at seams thru asphalt and concrete well cap.

MWH expects to submit report in Dec. or early January.

Reports - MWH has a number of reports in preparation for submittal in January.

HAS Lockdown - Be careful of icy conditions. Concern about product recovery operations in cold weather. Water level gaging on Dec 20.

Next Mtg - Fri Jan 13, 2006 at MWH Office @ 10 AM
Mtg over @ 10:47 AM

Jim Campbell



Site: American Chemical Service, Inc.
 Proj. #: 44728 AES [46526 RAC]

Roll: 82 Photo #1

Date: 12-06-05 Time: 0835

Photographer: Larry Campbell

Description: Photo facing southwest showing Amy Clore taking reading of air injection system upgrades in ONCA SBPA ISVE blower shed.



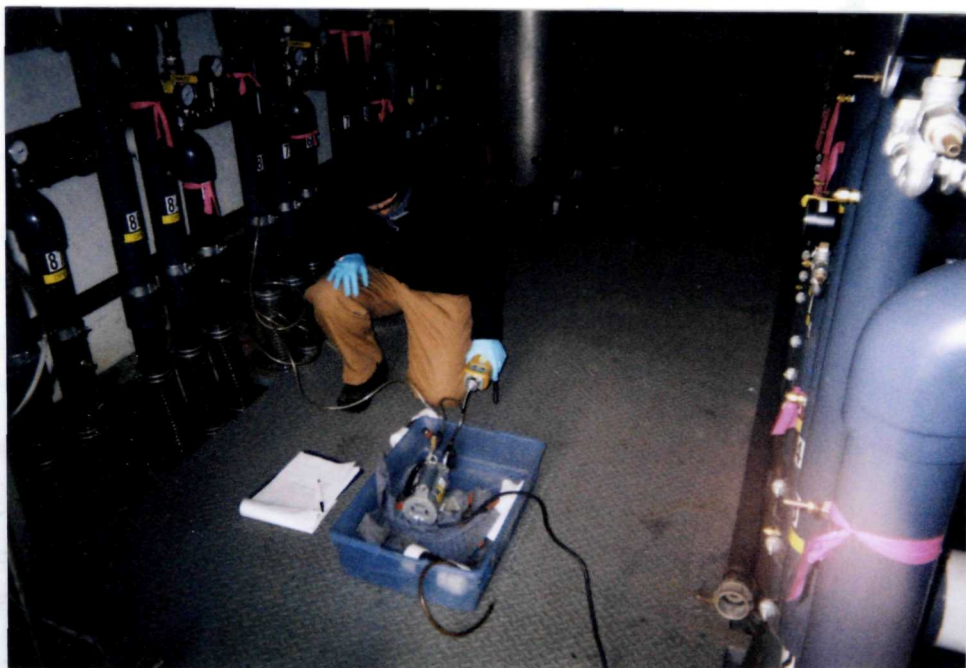
Site: American Chemical Service, Inc.
 Proj. #: 44728 AES [46526 RAC]

Roll: 82 Photo #2

Date: 12-06-05 Time: 0841

Photographer: Larry Campbell

Description: Photo facing northwest showing gage on SVE51 indicating ~1.8 psi injection pressure.



Site: American Chemical Service, Inc.

Proj. #: 44728 AES [46526 RAC]

Roll: 82 Photo #3

Date: 12-06-05 Time: 0843

Photographer: Larry Campbell

Description: Photo facing southeast showing Amy Clore using PID to measure VOC concentrations in vapor extracted from SVE wells.